## **BELZONA® KNOW-HOW**

#### FOR REBUILDING DAMAGED EXPANSION JOINT EDGES

# TCC-11

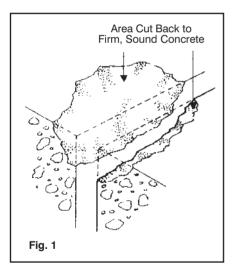
#### **Common Problems**

- Production of uneven floor running area due to impact or chemical attack on joint edges.
- Water / chemicals by-passing sealant.
- Need to re-design joint to accomodate additional movement.

#### Set-up

All work should be carried out in strict accordance with the relevant Belzona® Instructions For Use.

Suitable timber battens wrapped in polyethylene sheet will be required to form the expansion joint (fig. 2). The width of the batten should be chosen so as to either replicate the existing joint width or to provide a joint of sufficient width to accommodate the predicted movement. The movement accommodation factors of the sealant to be used should be established prior to setting the width of the joint.



#### **Surface Preparation**

All loose crumbling or deteriorated concrete should be chiselled away to expose fresh sound concrete (fig. 1).

The repair should be butt jointed to the existing concrete at the extremities of the repair for heavy duty applications, although, for light duty applications, the repair may be feather-edged.

All loose debris and dust should be removed from the joint by vacuuming and any moisture in the concrete dried out using a suitable heat source.

Surfaces contaminated by chemicals should be thoroughly cleaned by either steam cleaning equipment or by scrubbing with a detergent solution. After final rinsing with clean water, the surface should be dried.

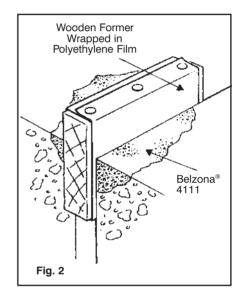
#### Conditioning

Application of the **Belzona**<sup>®</sup> **4111** requires the use of **Belzona**<sup>®</sup> **4911** to achieve maximum adhesion to the substrate. This should be mixed in accordance with the relevant Belzona<sup>®</sup> Instructions For Use, and stippled well into the surface using a stiff bristled brush.

Application of **Belzona**<sup>®</sup> **4111** should commence immediately the substrate has been conditioned.

#### **Application**

The joint forming batten, wrapped in polyethylene sheet, should be positioned vertically in the joint. **Belzona**® **4111**, mixed in accordance with the relevant Belzona® Instructions For Use, should be trowelled up to the formers to rebuild the expansion joint noses (fig. 2). Care should be taken to pack the **Belzona**® **4111** down to prevent air pockets being formed. The **Belzona**® **4111** should not be taken beyond the prepared and conditioned substrate.



Once the **Belzona® 4111** has cured, the former can be withdrawn and a suitable sealant used to fill the joint. Please refer to the Belzona® Know-How Systems Leaflet TCC-12 "Sealing Expansion and Construction Joints".

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### BELZONA® KNOW-HOW FOR REBUILDING DAMAGED EXPANSION JOINT EDGES

#### Belzona® Technical Comparison:

Product	Consistency	Impact Resistance	Adhesion to Concrete	Working Life at 60°F (15°C)	Full Chemical Cure at 60°F (15°C)
Belzona® 4111	Mortar	High	High	45 minutes	24 hours

#### **Recommended Equipment:**

Mixing and application tools are included in each pack of Belzona®. Prior to carrying out the repair, however, it is important that all other necessary tools and equipment are available on site. Every situation will be somewhat different, but the basic requirements could include those shown to the right.

- Chisels
- Vacuum Cleaning Equipment
- Power Mixing Tools
- Trowel
- Timber Battens
- · Polyethylene Sheeting
- Suitable Protective Clothing/ Equipment
- Hot Air Blowers for Drying Substrate
- Stiff Bristled Brushes

For more complete technical information, please refer to the appropriate Belzona® Product Specification Sheet. For detailed instructions on surface preparation, mixing and cure, please refer to the appropriate Belzona® Instructions For Use. Comprehensive Health and Safety information is provided with the product. All of these are available through your local Belzona® Engineer

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